



JSC's Raul Mejia, a member of Las Lamas, played Spanish guitar at last week's Hispanic Heritage celebration. Photo on Page 4.



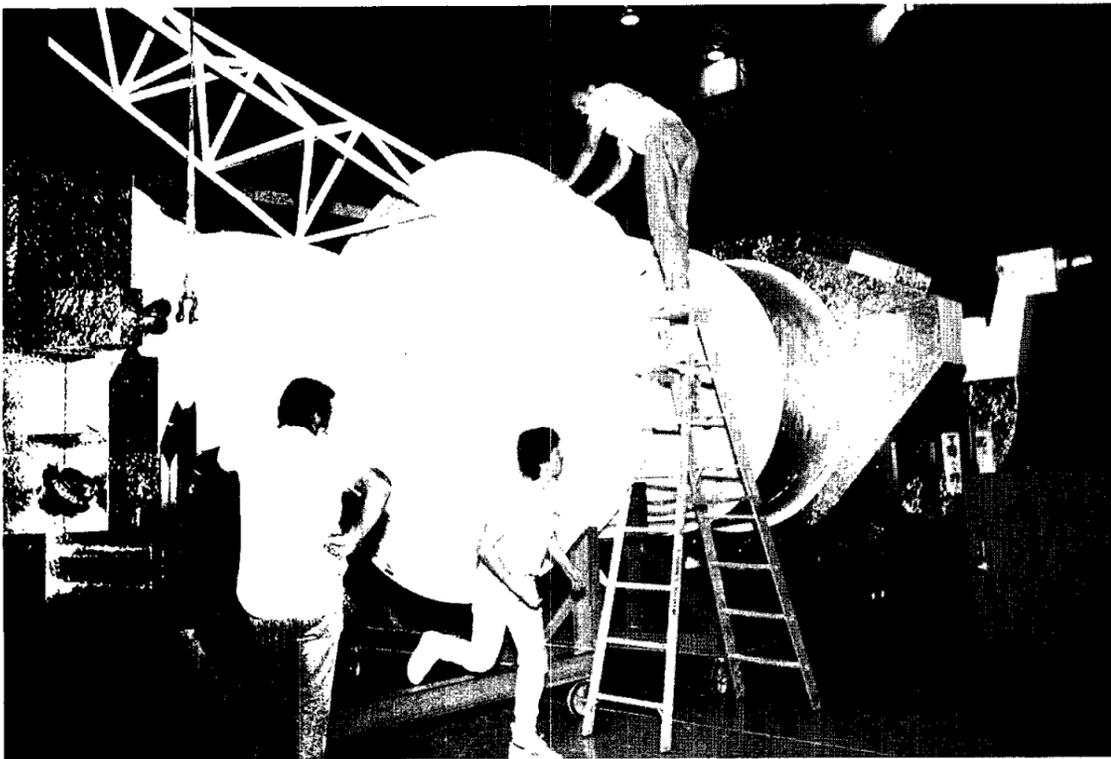
JSC's Chuck Biggs is this year's distinguished alumnus at the University of Houston-Clear Lake. Story on Page 4.

Space News Roundup

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No. 40



JSC Photo by Robert Markowitz

Workers in Bldg. 9A ready a full-scale model of the Ulysses spacecraft and its boosters for placement in the payload bay of the Full Fuselage Trainer. The model, produced by United Scale Models, will remain in the FFT for the duration of the mission.

Countdown clock ticking smoothly for *Discovery*

By James Hartsfield

With the countdown clock smoothly ticking toward *Discovery's* 6:35 a.m. CDT Saturday liftoff, every operating manned spacecraft NASA owns is scheduled to be either in orbit or on a launch pad by mid-Tuesday.

Discovery's launch preparations have gone well, and the orbiter appears in good shape with no problems in sight that could affect the launch, Vehicle Manager Dave O'Brien said Wednesday.

"This launch has been planned for Oct. 5 for well over a year, and we're just one day off due to a payload processing slow-up," O'Brien said. "We have maintained the schedule through the entire processing flow since *Discovery* landed from STS-31 on May 4."

As of late Wednesday, forecasts for launch time called for a 70 percent chance of favorable weather. *Discovery's* crew—Commander Dick Richards, Pilot Bob Cabana and mission specialists Bruce Melnick, Bill Shepherd and Thomas Akers—arrived at Kennedy Space Center Wednesday afternoon.

"We're optimistic come Saturday that we're going to have a good, solid space shuttle to fly," Richards said shortly after the crew arrived in Florida. "The Kennedy Space Center people have done an outstanding job getting this vehicle ready to go. We've had nothing but good reports and our

expectations are high. Florida's a beautiful place, but I don't think astronauts like to stay here very long—and I think about three days will be it for us."

Once *Discovery* lifts off, *Columbia*, now on Pad 39A, will take its place on Pad 39B, a move slated to begin early Monday. Twenty-four hours later, *Atlantis* is scheduled to begin its journey to take the spot vacated by *Columbia* on Pad 39A and begin preparations for a tentative Nov. 7 lift off on STS-38, a Department of Defense dedicated flight.

This week, baggies are being installed over 23 joints in *Columbia's* main propulsion system in preparation for further leak checks of the system using gaseous helium. Also, fit checks were performed in the aft fuselage for television cameras and plexiglass doors to be used in a future liquid hydrogen tanking test. No tanking test will be done before *Columbia* is moved to Pad 39B.

Atlantis was rolled over to the Vehicle Assembly Building early Wednesday morning and was hard mated to the external tank and solid rocket boosters by Thursday. The various elements will be further mechanically and electrically connected prior to *Atlantis'* move to the pad on Tuesday.

First motion for *Columbia's* pad switch is planned for 3 a.m. CDT Monday, and first motion of *Atlantis'* roll out is set for 3 a.m. CDT Tuesday.



STS-41
Ulysses

Witness plate to gather Intelsat data

By James Hartsfield

When *Discovery* heads for space this weekend, it will carry with it a JSC-designed experiment to prepare for the possible 1992 rescue of a satellite stranded in a low orbit earlier this year.

The Intelsat Solar Array Coupon (ISAC) was a quickly manifested experiment for STS-41 that will provide technicians with an insight into whether the stranded Intelsat-VI satellite is worth rescuing with the shuttle.

ISAC consists of samples of solar array materials identical to those on the Intelsat satellite, which has been stranded in a low orbit since April. Current plans are to have shuttle astronauts attach a new upper stage to the satellite, allowing it to finally be boosted to its planned 22,300 mile-high orbit. However, officials with the International Telecommunications Satellite Organization (Intelsat) want to be certain Intelsat-VI still will be operable.

The solar array materials, specifically samples of the silver interconnects in the solar panels, are mounted on *Discovery's* robotic arm. The arm will be extended to hold the samples perpendicular to the payload bay, facing the spacecraft's direction of travel, for at least 23 hours during the flight. The idea is to expose the samples to the corrosive effects present in low-Earth orbit, and, from the results, gain an understanding of whether Intelsat's time in low orbit will damage the

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Please see **WITNESS**, Page 4

Smoking easy to rationalize, tough to quit

[Editor's note: With 17 years of cigarette smoking behind him and a Jan. 1, 1991, deadline for a smoke-free JSC work environment ahead of him, Public Affairs Specialist Brian Welch is trying to quit. This is the second of eight installments.]

By Brian Welch

Last week, you'll remember, 58 of us began attending the two smoking cessation classes being offered at JSC, and our first homework assignment was to quit smoking for 24 hours.

Well, I didn't exactly make it on schedule. I did manage to refrain from smoking for about five hours on Thursday afternoon, with another eight hours thrown in later that night and on into the next morning. Yeah, I know. The gun has barely sounded in this race, and I'm already prostrate across the first hurdle.

But this is a distance race, after all, and I can still pick myself up, dust myself off, and get back into the running. There is a flip side, of course, an alternate point of view probably best expressed by an extremely smug friend of mine who quit cold turkey on April 4, 1988. Former smokers know just how to phrase things, so as to evoke exactly the right balance between encouragement and compassion, not to mention promoting one's sense of self-worth.

"You mean you're going to admit to everyone at the Johnson Space Center that you are a spineless fool?" he asked.

Well, something like that. I don't know how the rest of my classmates

did yet, since I am writing this on Monday morning, October 1, and the second class doesn't meet until tomorrow afternoon. But I do know this is the point at which the second thoughts are beginning to kick in. And I wonder, why are we doing this?

What is the motivation for 58 bright, charming and highly accomplished civil servants to sign up for this Trial of the Damned? Could it be that unruly mob behind us with pitchforks, torches and "Thank You For Not Smoking" signs? Society's growing reaction to

After all, we've known all along that tobacco addiction is the primary cause of preventable

death in this country. Some 1,000 of us die each day from smoking. But we light up anyway, and salute the fallen with a cigarette between our fingers.

We've seen pictures of diseased lungs and heard the stories about the horrors of emphysema. And it doesn't take a rocket scientist to figure out that this is a dirty, smelly, obnoxious and expensive habit. A pack of cigarettes now costs \$2.10, which means a single cigarette is worth more than a dime, and the price is going up about as fast as first-class stamps.

We know that our habit introduces a health risk to those around us who do not smoke, but we manage to rationalize things and puff along anyway.

You have to be clear on something: there is no pride in the realization that smoke from

Please see **KICKING**, Page 3



Combined Federal Campaign ups goal

JSC kicks off its 20th annual Combined Federal Campaign on Wednesday, and this year's Texas Gulf Coast CFC chairman—JSC Deputy Director Paul J. Weitz—is asking all employees to help the center achieve its \$350,000 goal.

The CFC is a once-a-year voluntary fund-raising effort that gives JSC employees a chance to contribute to local, national and international health and welfare charities. The campaign will start with a kickoff at 9 a.m. Wednesday in Bldg. 1, Room 966, and runs through Nov. 13.

The total goal for the Houston United Way drive is \$61.6 million, and Weitz wants to see Houston federal government employees contribute \$2 million of that through the CFC.

Last year, JSC employees contrib-

uted \$315,864, or 19 percent more than the \$275,000 goal.

"We're asking everyone to donate 1 or 2 hours worth of their salary per month this year," said Teresa Sullivan, JSC's CFC coordinator. "If they would do that, we could easily surpass our goal."

Employees who give 1 or 2 hour's pay per month will be eligible to win a drawing for a round-trip airline ticket to anywhere in the continental United States. Those who give 1 hour's pay per month also will receive an Eagle pin, and those who give 2 hour's pay will receive an Eagle pin and a coffee cup.

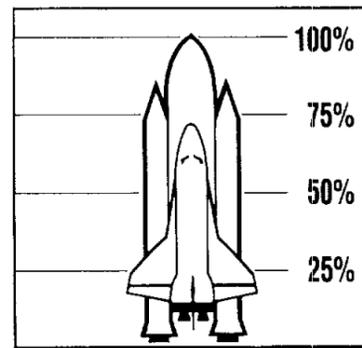
The CFC supports many worthwhile organizations, including two of special interest to JSC employees—the NASA College Scholarship Fund Inc., which

provides educational assistance to selected NASA dependents, and the Manned Space Flight Education Foundation Inc., which is chartered to design, build and operate a new visitor center at JSC.

Employees may earmark their contributions for any of the 700 charities.

"I believe that JSC personnel care, and it is my sincere hope that you will contribute as liberally as possible to this deserving combined campaign," said JSC Director Aaron Cohen.

Each JSC organization will have a division or office captain responsible for soliciting donations. They will attempt to contact each JSC employee during the campaign. If you are not contacted and would like to begin participating or change your contribution, contact Sullivan at x38970.



1990 GOAL: \$350,000



Furlough situation remains up in air

President Bush and Congressional leaders agreed on a stopgap budget measure last weekend, but the continuing resolution that forestalled furloughs only lasts through today.

"We are not out of the soup," said JSC Human Resources Director Jack Lister.

Furloughs for JSC civil servants are still possible under the Gramm-Rudman-Hollings law, which had been scheduled to invoke automatic sequestration budget cuts on Monday if Congress and the President had not acted.

The negotiators' budget agreement included deficit-reduction cuts of \$500 billion over the next five years

Please see **FURLOUGH**, Page 4

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Gift Store from 10 a.m. to 2 p.m. weekdays.

General Cinema (valid for one year): \$3.75 each.

AMC Theater (valid until May 1991): \$3.50 each.

Sea World (San Antonio, year long): adults, \$17.25, (2-day \$21.95); children (age 3-11) \$14.75, (2-day \$18.95).

Texas Renaissance Festival Bus Trips (Oct. 13 or Nov. 10 - includes transportation and tickets): adults, \$12; children, \$6 (under 5), \$9.

Texas Renaissance Festival (Saturdays and Sundays Oct. 6-Nov. 18): adults, \$8.95; children, \$4.95.

Children's Halloween Party: (11 a.m.-2 p.m., Oct. 27, Gilruth Center): adults, \$1; children, \$4.

Rockets vs. Atlanta Hawks: (7:30 p.m. Oct. 20, Summit); \$5.

JSC

Gilruth Center News

EAA badges—Dependents and spouses may apply for a photo I.D. 6:30-9:00 p.m. Monday-Friday.

Defensive driving—Course is offered from 8 a.m.-5 p.m., Nov. 17 and Dec. 15. Cost is \$15.

Weight safety—Required for use of the Gilruth Center weight room. The next classes will be from 8-9:30 p.m. Oct. 10 and 25. Cost is \$4.

Aerobics and exercise—Both classes are ongoing.

Ballroom dance—Professional instruction in beginning, intermediate, and advanced ballroom dancing. Classes began Oct. 4 and meet every Thursday for eight weeks. Beginning and advanced classes meet 7-8:15 p.m. Intermediate class meets 8:15-9:30 p.m. Cost is \$60/couple.

Fall run—The 10km and/or 2 mile races for the annual Intercenter Run will be held throughout October. Runners may submit their times at the Gilruth Center.

Softball sign-ups—Winter softball league sign-ups will be Oct. 16-18 at the Gilruth Center.

Country and western—Dance lessons begin Oct. 29. The six-week class meets Mondays. Cost is \$20 per couple.

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Technical Library News

These new publications are available in the JSC Technical Library, Bldg. 45, Rm. 100.

Total Quality Management Guide: Key Features of the DOD Implementation of TQM, Department of Defense, 1989. TS 156.6.D46.

Total Quality Management Through Variability Reduction, William E. Eureka, 1989. TS 156.6.E97.

Introduction to Total Quality Management (TQM): One-day Seminar, Space and Naval Warfare Systems Command, 1989. TS 156.6.I57.

Flight Mechanics/Estimation Theory Symposium, NASA, 1989. TL 1050.F58.

JSC

Swap Shop

Property

Lease/Purchase: Distress sale: 4-2-2 new custom brick, FPL, fans, miniblinds, jacuzzi in master bath, formal living/dining, ansom. FHA. Dove Meadows, Dickinson. Kevin K. 282-3417 or 337-1485.

Rent: Lake Livingston w/rent house, 3-2, CA/H, furn., cov. decks, pier, new cond., wk/wknd rates. 482-1582.

Rent: Lake Travis cabin, priv. boat dock, CA, heat, fully equipped, accomm. 8, dly/wkly, \$325/\$80. 326-5652.

Sale: Baywind I condo, 2-2, FPL, split plan, 975 sq ft, \$36,500. Jim, x33821 or 554-4357.

Sale: Friendswood, Wedgewood Village, 3-2-2D, custom contemp., arium, FPL, whirlpool, trees, decking, CCISD, \$93K. 482-2138.

Sale: Baywind I, 2-1.5-2, blinds, fan, W/D, new carpet, vinyl paint/wall paper, downstairs, \$34,500. Allison, 282-4454, 282-6784 or 280-9424.

Lease: Heritage Park, lg. 3 BR in newer area, eat-in kitchen, FPL, DR, newly painted, no pets, \$725/mo. 282-2787 or 532-1240.

Sale: Univ. Green, 2-1-2 patio home, fenced, new paint, vaulted ceiling, miniblinds, custom drapes, fans, FPL, deck, \$76K. 480-7338.

Sale: Limestone County, 40 acre pasture land on paved road, fenced, ponds, barn, corral, catch pen, 2-2 mobile home, sell by owner, \$66K. 479-3965.

Lease: Piper's Meadow, 3-2-2 w/study, FPL, vaulted ceiling, fans, refing brkch, over 1600 sq. ft., will take short term (6 mo.) lease, \$795/mo. Jon, 796-8225.

Lease: CLC/Oakbrook West, 4-2.5-2d, contemp., lg. living/dining, FP, security system, garage opener, no pets, \$895/mo. 482-6609.

Lease: Sycamore Valley/Ellington Field, 3-2-2, FP, formal dining, inside utility rm., mini-blinds, fenced, new carpet, no pets, \$695/mo. 482-6609.

Rent: Galveston condo, furn., sleeps six, Seawall Blvd. & 61st Street, dly/wkly, wknd rates, pool cable TV. x33479 or 486-0788.

Cars & Trucks

'83 Ford van, V8, power, cruise, dual tanks, \$4,000. Samouce, x35053 or 482-0702.

'87 Ford Mustang, 2.5 liter eng., very clean, cream color, new tires, \$6,500 or assume notes of \$289/mo. for 2 yrs. Donna, 283-5453 or 337-3838.

'84 Ford Tempo, 2-dr, manual shift, radio/cass., tires in good cond., good gas mileage, \$2,000. 332-4732.

'69 TR6, overdrive, AC, rebuilt eng., low mi., ex. cond., \$4,500. x34818 or 480-8335.

'75 Mercury Marquis, green, 4-dr, needs work, \$700. 643-0331.

'83 Mazda RX-7 GSL, ex. cond., 75K mi., sunroof, 60 series tires, new brakes, 5-spd., \$3,500. 478-1596 or 486-4508.

'79 Cullass cruiser wagon (sm. version) looks/runs great, AC, stereo, deisel eng, \$600 or trade. 333-6821 or 474-3637.

'89 Honda Accord LX-1 coupe, ex. cond., 17K mi., 5-spd., warr., \$13,500 OBO. 486-6859 or 333-6818.

'68 Plymouth Fury II, 318 eng., new oil pump, distrib., starter, coil, batt, rebuilt carb, very good cond. 946-4867.

'84 Linc Continental, V8, 4 wheel disk brk, 74K mi., auto AC, auto headlights, A/T, keyless entry, AM/FM/cass., dig. dash, trip computer, \$7,250 OBO. Ed, x32586.

'81 Monte Carlo, auto, AC, ex. cond., \$1,750 OBO. Lee, x36447 or 481-8819.

'85 Pontiac 6000LE, V6, AC, auto, pwr windows, locks, and seat, tilt, cruise, alum. wheels, two-tone brn, 78K mi., \$3,750. 486-7245.

'85 Dodge Charger, 2-dr, htcbk, 52K mi., \$2,000. x31833 or 534-6073.

'89 Ford Probe LX, red w/gray int., 16.4K mi., sun roof, upgraded stereo, pwr pak, ex. cond., \$10,900. 335-1711.

'82 BMW 320i, 5-spd., sun roof, charcoal grey, good cond., \$4,500. 482-2810.

'75 Chevy Monte Carlo, good 350 cu. in. V8, body not much, not driven since Apr. 1990, \$250 w/o tags-\$320 w/tags. Jim, x30145 or 481-3102.

'71 240Z, needs work, \$900. Tim, 283-1271 or 794-0636.

'88 Ford T-Bird TC, dk blue, std, leather, all options,

26K mi., ex. cond., clean, \$11,000. Rich, 480-2570.

'77 GMC Jimmy, 4WD/2WD, 87K mi., auto, 350 eng., AC, AM/FM stereo, remov. fiberglass top, runs good, ex. cond., \$2,300. x35868 or 480-2427.

'83 B2000 Mazda PU, 5-spd, AC, silver, \$650 OBO. Chuck, 282-3907 or 482-2498.

'89 Chev. Cavalier Z24, white w/blue int., 2-dr., tilt, cruise, AM/FM/cass., good cond., \$8,500 neg. 472-0232.

'83 Porsche 911 Targa, 36K mi., kin red w/brn leather, two bras, cover, alarm, 2.5 yrs/30K mi. left on warr., \$22,500. David, 554-2992 or 282-3212.

'88 Mustang conv., auto, leather int., cruise, tilt, pwr l/w, \$10,200. x35786 or 334-1852.

'79 International Scout 4WD, factory rally pkg, V8 345 4 bbl, soft top, hard top, roll bar, warn hubs, rancho susp., 3" body lift, fresh trans. and transfer case, \$3,500 OBO. Wayne, 283-6514 or 337-5990.

Cycles

'84 YZ125, lots of new parts, very good cond., \$550. 480-9698.

'82 Harley Davidson Sportster XLH motorcycle, elec. start, ex. cond., low mi., new batt., \$2,875 or trade for car or Mac II PC. x30092 or 481-3637.

2 Trek 560 racing bicycles, 19 in. and 25 in., chrome-ni frames w/blk imron paint, Shimano components, blk Matrix rims, ex. cond., \$300 ea. Joe, x34538 or 481-1317.

'81 Honda CB900F motorcycle, sport model, well maintained, fresh Avon tires, helmet included, 13K mi., \$1,000 OBO. Wayne, 283-6514 or 337-5990.

Boats & Planes

Slatom ski, 67' Ebonite Shuttle, Ultra Pro ski rope, anchor line, oar and other boat accy., \$75 OBO. 486-4963.

Aircraft propeller, Sensenich 7ADM6-0-58, overhauled and yellow tagged, fits some Beech, Piper PA-18, PA-22, PA-28 series aircraft, \$900. 530-2299.

'9 Bass Hunter boat, trolling motor, \$295. Jim, x36588 or 358-9598.

'16 V-hull boat, 65HP Merc. w/tr, \$2,000. 943-3305.

'83 27' Chaparral Cabin Cruiser, new electronics, swim platform, full galley/head, AC & more, sleeps 6. x31833 or 534-6073.

'10' Jon boat w/4HP motor in good cond., \$300. 480-9698.

'79 Renegade 16' ski boat, 140HP Evinrude, SST prop, trir, new ignition system, carpet, paint, etc., ex. cond., \$2,600 OBO. Mike, 333-6868 or 486-7846.

Windsurfers, Mistral Maui, complete, \$400; Sailboard Masterclass 355, complete, \$400; Klepper, board only, \$250. John, 486-6133.

Audiovisual & Computers

Cordless telephone, remote operated ans. machine., ex. cond., \$50 for both. Tony, x34415 or 480-2206.

Model 4p computer 174K, DMP 500 computer, all SW, 2 modems, \$400. Donna, 283-5453 or 337-3838.

Compaq Plus computer, portable, 1 FDD, 10 meg HD, 1200 modem, \$490. Jim Bates, x31347 or 944-4687.

Video Camcorder batteries for Canon 8mm, 4 CM1060 NiCd batt. 6V 1000 mAh, new \$75, asking \$50 ea. Patrick, x32635 or 488-1079.

IBM compat. laptop, backlit screen, 2 720K 3.5" FDD, 1200 baud modem, some SW, \$800. Mary Lou, x34306 or 480-2206.

Drum chip (1MB) 256KB, 70ns, 36 qty., \$100 for all; Heathkit-Zenith H89 computer, full documentation, \$350. James Gordon, 487-3223 or 623-3782.

Radio Shack dot matrix printer, IBM compat., two manuals included, one extra ribbon and ink for the ribbon, \$50. Becky, x36530 or 944-8503.

Satellite TV system w/tuner, trackerc and remote control, tracks up to 450 channels, ex. cond., \$500. Sharon, x30552 or Barbara, 434-5083.

Ti-994A computer w/assorted SW cartridges and accy., \$150. Ed, x36969 or 332-0442.

Genoa Super EGA Hires Plus card (800 x 600), \$100, NEC CGA monitor and CGA card, \$65; 2 full ht 5.25" 360K disk drives, 1 works, one doesn't, \$80; 5 boxes 5.25" 360K disks, new, \$20. Win, 282-3856 or 534-0032.

Today

Cafeteria menu — Special: tuna and noodle casserole. Entrees: liver and onions, deviled crabs, roast beef with dressing. Soup: seafood gumbo. Vegetables: whipped potatoes. peas. cauliflower.

Monday

Cafeteria menu — Special: breaded outlet. Entrees: beef chop suey, Polish sausage with potato salad. Soup: French onion. Vegetables: okra and tomatoes, green peas.

Tuesday

Technology van — The NASA Technology Transfer van will be at JSC from 9 a.m.-1 p.m. Oct. 9 in the parking lot south of Bldg. 25. The van's displays highlight the importance of transferring technology to the private sector.

Cafeteria menu — Special: fried chicken. Entrees: Salisbury steak, shrimp Creole. Soup: split pea. Vegetables: mixed vegetables, beets, whipped potatoes.

Wednesday

Threshold Group — The Threshold Group will hold a coordinating meeting from 11:30 a.m.-12:30 p.m. Oct. 10 in Bldg. 45, Rm. 128. New officers will be installed, and charter election will be announced. For more information, contact James Sturm at x33085.

Cafeteria menu — Special: stuffed bell pepper. Entrees: fried catfish with hush puppies, braised beef rib, barbecue plate, wieners and beans, shrimp salad. Soup: seafood gumbo. Vegetables: corn O'Brian, rice, Italian green beans.

Thursday

NPMA dinner meeting — The National Property Management Association will hold its monthly dinner meeting at 5 p.m. Oct. 11 in the Gilruth Center. For more information contact Sandra Pierce at 282-4151.

Cafeteria menu — Special: barbecue smoked link. Entrees: beef Stroganoff, turkey and dressing. Soup: chicken noodle. Vegetables: Lima

beans, buttered squash, Spanish rice.

Oct. 12

Cafeteria menu — Special: meat sauce and spaghetti. Entrees: baked scrod, liver and onions, fried shrimp. Soup: seafood gumbo. Vegetables: green beans, buttered broccoli, whipped potatoes.

Oct. 18

NCMA workshop — The National Contract Management Association Houston Chapter will hold a workshop and luncheon Oct. 18. The workshop, featuring Phil Shannahan and James Wilcox of Vision Analytics Inc., will look at budget forecasting and cost control from 8:30-11:30 a.m. at the McDonnell Douglas Tower, Rm. 160. The luncheon, featuring a speech by JSC Procurement Director Gene Easley, starts at noon at the Gilruth Center. Deadline for luncheon reservations is noon Oct. 12. For more information, call Nancy Liounis at x31838.

Oct. 19

Houston Space Society — The Houston Space Society will meet at 7 p.m. Oct. 19 at the University of Houston, Center Underground, Pacific Room. James Davidson, a member of the National Space Society board, will talk about "Ulysses: The Environmental Mission to the Sun." For more information, call 639-4221.

Oct. 20

Wings Over Houston — The 1990 Wings Over Houston Airshow will be Oct. 20-21 at Ellington Field. Contact Col. Ray Jones, 850-7545, or Lu Lewis, 784-5200, for more information.

Oct. 23

BAPCO meeting — Bay Area PC Organization (BAPCO) will meet at 7:30 p.m. Oct. 23 at the League City Bank and Trust. For more information contact Earl Rubenstein, x34807, or Tom Kelly, 996-5019.

Oct. 25

Amateur Radio Club — The JSC Amateur Radio Club will meet at noon Oct. 25 in Bldg. 16, Rm. 253. For more information, call Gil Carman x38031.

Oct. 28

Bicycle ride — The Texas Coastal Century bicycle ride, a comprehensive tour of the greater Bay Area, will be from 8 a.m.-5 p.m. on Oct. 28, starting at the University of Houston-Clear Lake. Registration is \$15. For applications and more information, visit the Gilruth Center. Call Mike Prendergast at 335-2505 for details.

Oct. 30

Space conference — Space Exploration '90, a conference and aerospace industry exposition sponsored by the NASA Alumni League, will be held Oct. 30-Nov. 1 at the South Shore Harbour Resort and Conference Center. Contact Carol Ramey, exposition manager, 800-765-7615, for more information.

Nov. 6

Ada users' symposium — The third annual NASA Ada Users' Symposium will be Nov. 6 and is hosted by JSC and the MITRE Corp. For more information contact John Cobarruvias, x39357, or Sheila, 333-0910.

Nov. 7

IEEE video conference — IEEE Galveston Bay Section Video Conference will be at 10:30 a.m. Nov. 7 in the Gilruth Center. Registration deadline is Nov. 2. For more information, call Andy Lindberg, x31474.

Nov. 14

NCMA banquet — The National Contract Management Association Houston Chapter will host its 23rd annual Educational Conference Nov. 14. The conference will include a Nov. 14-15. Registration is \$100 for members; \$125 for nonmembers; and \$25 for the banquet only. Registration deadline is Oct. 26; call Sue Garman, x35998, or Linda Frazier, 333-6389.

Full sz. box spring, matt, \$100 OBO. x38896 or 482-9447.

Walnut-finish computer furniture, 2 desks, 2 printer units, 2 computer chairs, and other office items. Angela, 488-5172.

White French Provincial desk w/ 3 side dwrs, 1 center dwr, 3 shelf bookcase; lady's 3-piece Samsonite luggage; 1 ea. man's Hartmann and American Tourister 2-suitcase luggage; 30" bar stool; 2 dwr end table w/glass top; hexagonal end table w/2 door accessible interior; coffee table w/dwr, 2 table lamps w/shades. 532-1994.

Redwood dining room table w/4 chairs, \$250. 486-1756.

Small mahogany, hand-carved, round, dining room table w/2 leaves and 8 chairs, unfinished, \$875. x33182 or 486-2622.

Tripple dresser, 2 mirrors, headboard, frame w/night stand, all solid oak, \$425; mattress and box springs, \$150. x33182 or 486-2622.

Imitation Duncan-Pfife drop leaf DR table w/mahogany veneer, 3x2 folded, extended seats 12, minor water damage to ext. leaves, \$50. R. Franco, 992-2711.

Photographic

Nikon EM 35mm camera, f1.8, 50mm, case, manuals, ex. cond., \$100. Tony, x34415 or 480-2206.

Celestron C90, 1000mm, astronomy or photography adaptor for camera eye piece, carrying case, \$450 OBO. 486-1756.

Wanted

Want baby crib in ex. cond., Mary Lou, x34306 or 480-2206.

Want non-smoking roommate to share exquisite, secluded, 3-BR home of 2094 in Lakeside Subdiv., 10 min. from NASA, \$350 plus 1/3 util. Holly, 486-7358.

Musicians wanted, drums, bass, keyboard needed to form pseudo-rock band. Paul, x37591.

Want '75-'80 Ford Pinto, auto., no pwr steering, no pwr brakes, no AC, body not important, does not need to run, must be towable. Trey, 280-4275 or 484-7834.

Want running troller, good cond. x39589 or 486-4508.

Want female roommate to share 3-2.5 in Meadowgreen, W/D, ceiling fans, \$200/mo. plus 1/2 util. Suson, 480-5752.

Want responsible teen or older for occasional babysitting for one 4 1/2 yr old girl, in our Heritage Park, Webster home, references, competitive rates. 332-0442.

Want female roommate to share lg 3-2.5-2 in CLC, \$330/mo. plus 1/2 util. Linda, x36681 or 486-5246.

Want roommate to share 3 BR house in LC. 332-8086.

Want an above the ground pool. Kay, 337-3122 or 480-1866.

Want roommate to share lg new house, 10 min. to JSC, \$325/mo. plus 1/3 util, no smokers, no pets. Carol, 474-5106.

Want Donnay Alwood tennis racket, Bjorn Borg signature, in good cond., 333-7206 or 480-9198.

Want gravity/immersion boots and assoc. hardware. 333-7303 or 332-7177.

Want boy's clothes, sz 5 and up, Levis, Wrangler's, Bugle Boy, etc. Carol, x31698 or 480-2467.

Want roommate, non smoker to share 3 BR duplex, washer/dryer, \$25/mo. plus 1/2 util. Jana, 283-4262 or 338-2588.

Miscellaneous

2 high back rattan chairs, \$50 for both; 4 used Bridgestone steel belted tires, P205/70R15, \$40. x38889 or 480-1340.

Surfboard, 6'8" tri-fin, md. pintail, \$200 OBO; sm child's bike, \$35; 6x9 car stereo spkrs, \$10; 1 dig pink volleyball, \$20. 286-7128.

Baby crib, ex. cond., \$80 OBO. 484-5149.

Jump King outdoor trampoline, good cond., \$150. 337-2680.

Golf clubs, 10 Dunlop Maxfly irons, 3 metal woods, bag and headcovers, \$200. Valerie, 283-5312.

Golf clubs, Tour Model III 1 - SW, \$16.95/club; metal woods, 1, 3, or 5, \$25/club. David, 554-5514.

20 gal. aquarium w/pump, under-gravel filter, light, \$15.

486-5527.

JVC stereo rack, \$45. Ted, x36894 or 280-9595.

York 3-ton central AC and coils, ex. cond., 2.5 yrs old, \$400. 554-2399.

Pool table, full sz, good cond., \$500. Tony, x35966.

Lawn tractor, 3-spd, elec. start, 8HP, like new. Diane, 471-5291.

Down mummy sleeping bag, good cond., \$60. Win, 282-3856 or 534-0032.

Black leather motorcycle touring jacket, sz 42, \$100. 334-2647.

Rowing and stairs/step exercise machines, both in ex. cond., \$70 ea. or \$125 for both. Tony, x34415 or 480-2206.

One-way Delta Airlines ticket from Houston Hobby to Washington, D.C. Dulles, leaves Oct. 16th at 9:45 a.m., arrives 5:20 p.m., \$95 OBO. 282-6684.

2 Oilers vs. Bills tickets, 11/26/90, field end zone, \$40/pr. Lora, x38477 or 476-1791.

Xerox 3701 copier, needs \$450 repair, \$300 OBO. Don, x38039 or 333-1751.

Baseball cards, Nolan Ryan rookie 1968, also 1970. 482-7005.

'85 Corvette rims, \$300 OBO. x31769 or 334-3836.

Drafting table, \$100; DP Chairman fitness system, \$200. 488-6917.

Casio FC-1000 graphic financial consultant calculator, \$60; Black & Decker 8" drill press #9400, 5-spd, 540 to 3600 rpm, 1/2" chuck, \$75. Tom Clark, 244-9842.

C

Kicking the Habit

Quitting smoking leads to immediate health benefits



(Continued from Page 1)

my cigarettes doubles the chance that the people whose offices are near mine, some of my favorite people in the world (even if they are non-smokers), will get lung cancer. That is a frightening statistic, courtesy of the Surgeon General, but even that isn't, in itself, enough. Sorry Billie. And Pam and Kari, Jeff and Barbara, Kyle and Steve and Kelly and Jack and Pat and Laura.

Nope, there's more to it than all of the above. More to it than knowing we can stop now and that our bodies will recover, more to it than the realization that we are borrowing against our own uncertain futures.

They cut my father open in May, from the shoulder blade almost to the breastbone, in a dramatic U-shaped incision which allowed access to his chest. The medical equivalent of popping the hood, I suppose.

Once they had opened him up—I try not to visualize this very graphically, but usually I fail—they removed the top lobe of his right lung, poked around for evidence of any other tumors, found none, and then sewed him back up again.

My Dad's scar is about two feet long. On the day of his surgery, he had been retired for less than two weeks. I got to his bedside two days later and spent a week listening to the bubbling tubes that kept his lung inflated.

The family doctor back home in Kentucky told him the tumor they removed, which turned out to be malignant, couldn't have been there for much more than four or five months.

"How do you know that?" my Dad asked him.

"Because there really is no survival rate for lung cancer after about six months," he said, "and you're going to live."

My Dad doesn't smoke any more.

The Surgeon General released the 21st annual report on smoking on the same day we all began the smoking cessation class at JSC. Yes, the irony was duly noted.

This year, instead of trying to scare the living hell out of us (which usually doesn't work because smokers have a dramatic talent for ignoring the obvious), Surgeon General

Antonina Novello decided to accentuate the positive.

The myth about quitting and gaining weight is, for example, just that, a myth, she said. The average weight gain for those who quit is five pounds, and studies show that fewer than two percent of the quitters gain more than 20 pounds. No doubt the myth arose when smokers failed to note the difference between their own weight and that of the monkey on their backs.

Novello's report, all 600 pages of it, also stressed the immediate health benefits for those who successfully kick the habit. The levels of carbon monoxide and nicotine in the bloodstream begin to go down as soon as two hours after stubbing out the last cigarette. Stopping also dramatically decreases the risk of developing cancers and heart and lung diseases.

Former smokers also live longer, the study showed. Those who quit before reaching the age of 50 have half the risk of dying of smoking-related illnesses as those who continue to puff away.

I've long admired Edward R. Murrow, who in the past few years has become something of a patron saint in the world of journalism. Cigarettes killed Murrow, who smoked three packs of Camels a day for most of his adult life. Camels, or "humps," as we used to call them in college, are pretty brutal. And Murrow chain smoked them.

A few years ago I started reading with relish the national bestseller by A.M. Sperber, "Murrow: His Life and Times." For some reason, I lost interest near the end of the book and the end of Murrow's life. Now I think I know why. It was because of passages such as this one:

"His smoking had intensified, a chemical means of keeping down the pressure. The cigarettes were now a necessary adjunct—just how much, Lindsay Wellington came to realize on an overnight trip when the two of them shared a room. Waking in the early morning hours, Wellington had looked over just in time to see Murrow beginning to stir, reaching almost in his sleep for the pack beside his bed. 'It was the first thing he did,' the BBC man remembered, 'barely awake, just an automatic movement.'

"He was borrowing heavily against the future, in a world where few thought further than making it from day to day."

And this one: "The cigarette, mood modifier that it was, meant control. 'It's not a prop,' he told a magazine reporter, 'I really need it.'

"Evidently he did; sixty to ninety a day, his long history of congenital lung problems notwithstanding. And he smoked Camels, the harshest cigarette on the market, no filters, inhaling deeply with every drag. Eddy Bliss later remembered being horrified, watching him light up without pausing for the flame to die down—'just drank it in, phosphates, everything.'"

Two days after the Surgeon General's report was issued, the Centers for Disease Control weighed in with similar findings.

Dr. Ronald Davis, director of the CDC's Office on Smoking and Health, was quoted by the Associated Press as saying, "Even though we knew quitting smoking was good for you, we never really had an idea of how much the risk goes down after quitting."

Like the Surgeon General's report, the CDC study scoffed at the idea that a fear of weight gain is realistic, and said only a small

percentage of quitters gain more than 20 pounds.

The CDC also said that the physical symptoms associated with quitting peak after two days and "rapidly subside" over the next two weeks.

That sounds like really good news, because here are some of the symptoms we might expect when we quit, according to the Methodist Hospital program booklet we got as part of the smoking cessation class: irritability and anxiety, coughing, sweating, frequent urination, constipation, sleepiness, sleeplessness, dizziness, mouth sores, bad taste, lack of concentration, dreaming of cigarettes, a sense of loss and other "idiosyncratic" symptoms not covered because all people are different.

Lovely. On our current schedule, we can look forward to all of that, appropriately enough, just in time for Halloween.

My sister still smokes, and she hates it.

She has two young sons, Carl, the oldest, and Craig, the toddler. Lynne belongs to that statistical group, cited in the Surgeon General's report, that says some 70 percent of the women who quit smoking during pregnancy take up the habit again within a year of giving birth.

Her husband is not amused.

The last time we discussed smoking, Lynne told me about the day when Carl came home from pre-school, fresh from a discussion of the evils of drug abuse, where he had learned a little bit about the complexities of adult life. I was aware of the war on drugs, but I hadn't realized that the shock troops in this army are 4 years old. That's a bit young, I think, perhaps too young to understand that some evils are more evil than others.

Later that afternoon, Carl watched as his mother reached for a cigarette and lit one. For the moment he forgot about the Teenage Mutant Ninja Turtles, who were methodically beating the stuffings out of Shredder on TV, and went into the kitchen where Lynne was puffing away while she did the dishes.

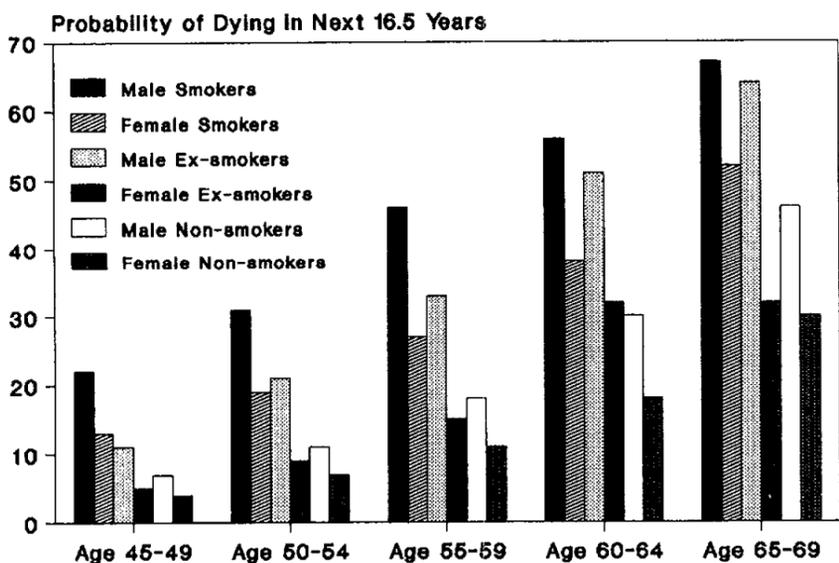
He leaned against the counter and looked up at her and then at the cigarette and asked, "Why are you doing illegal drugs, Momma?"

Countdown to a Smoke-free Environment

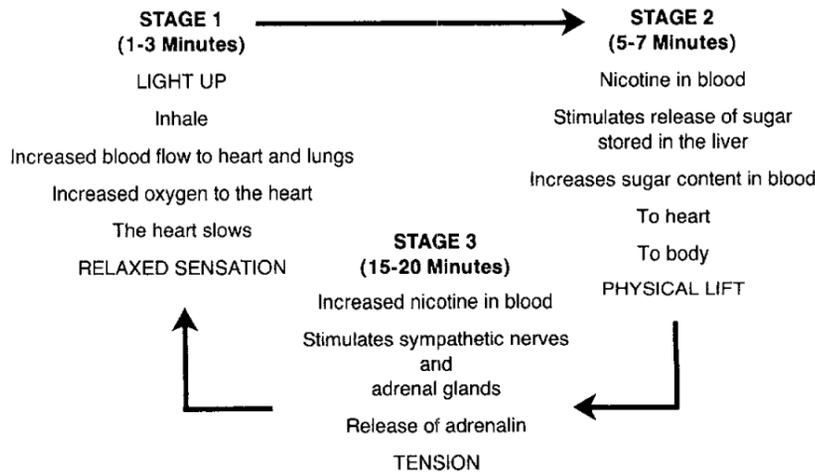


January 1, 1991

Health Benefits of Quitting



Smoking Cycle



JSC Electronic Photo by Kim Murray

Top: Charles Domingues, an instructor from the Institute for Preventive Medicine at Methodist Hospital, leads the Monday morning session of JSC's Smoking Cessation class in Bldg. 45. Left: The Surgeon General recently reported on the comparative life expectancy of smokers, ex-smokers and those who have never smoked. Above: Nicotine does not provide the "calming effect" smokers feel; rather it is the deep breathing associated with smoking.

Pair gets station integration posts

Tony E. Redding has been appointed special manager for integration in the Space Station Projects Office and John D. Holt will take over as manager of the Project Integration Office.

Redding will be responsible for assuring the integration of Work Package 2 systems and elements into the overall program. He will work closely with the Space Station Freedom Program Integration Office at JSC, the Element Integration Office at Marshall Space Flight Center and the Program Office in Reston, Va.

Redding, who joined JSC in 1964, has been project integration manager since February. He headed the Space Station Systems Engineering and Integration Office from 1984-1990.

Holt will merge his former area, the Operations Integration Office, into the Project Integration Office. He was manager of the Production Integration

Management Office in the Mission Operations Directorate from 1985-1988, and chief of MOD's Payload Operations Support Branch from 1983-1985. He joined JSC in 1967.

JSC

People

Biggs named top UHCL alumnus

Charles A. "Chuck" Biggs, chief of the Public Services Branch in JSC's Public Affairs Office, is the winner of the 1990 Distinguished Alumnus Award at the University of Houston-Clear Lake.

Biggs, who has led the branch since 1980, will receive the award Nov. 3 at

the UHCL Alumni Association's ninth annual Bayou Ball at the Hobby Airport Hilton.

"Chuck Biggs' love for education, commitment to UH-Clear Lake and outstanding achievements make him a standout among UHCL graduates," said Elaine Mercier, director of alumni relations.

Biggs earned his bachelor of arts degree at UHCL in 1984 and his master of arts degree at UHCL, in 1987. He has been instrumental in identifying internship opportunities for UHCL students, and has played a key role in UHCL's media studies program.

Cohen, Huffstetler to serve on panel

JSC Director Aaron Cohen and William Huffstetler, manager of JSC's New Initiatives Office, will discuss NASA issues at the Center for the



Redding



Biggs



Huffstetler



Stonebraker

Study of the Presidency's 21st annual Leadership Conference.

The conference, with a theme of "Congress and the Presidency of the 1950s and the 1990s," will observe the centennial of Dwight Eisenhower's birth Oct. 26-28 in Austin.

Cohen and Huffstetler will join NASA Administrator Richard H. Truly on a panel discussing the agency created by Eisenhower.

Engineer wins archery tourney

Rick Stonebraker, a quality engineer

for EBASCO at JSC, recently won first place in the team competition at the National Archery Target Championship in Oxford, Ohio.

Stonebraker also placed seventh in the individual competition, qualifying for the Championship of the Americas tournament to be held this November in Buenos Aires, Argentina. This was the fifth year in a row he had made the individual Top 10.

A member of the Southwest Houston Archery Club, he shot against 400 competitors from seven countries in the August tournament.

Cafeteria hours, too

MCC viewing, homecoming schedule set

The Mission Control Center viewing room will be open to JSC and contractor badged employees and their families during portions of the STS-41 mission.

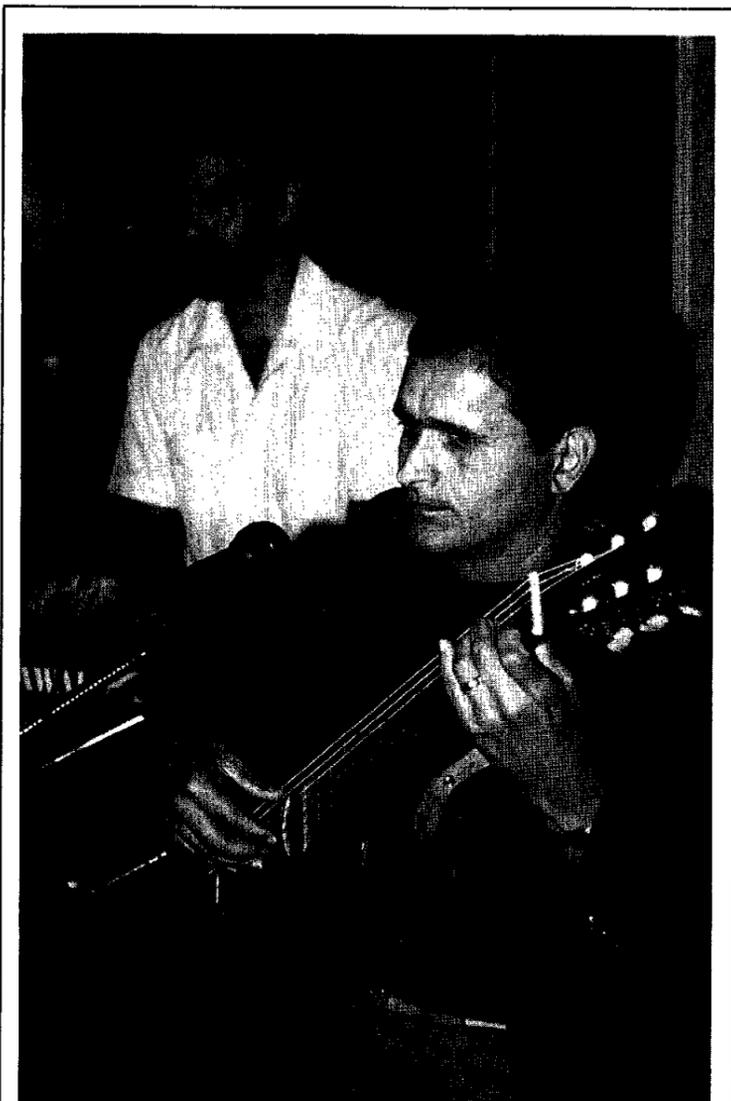
Based on a Saturday morning launch, employees will be allowed to visit the MCC from 2 to 5 p.m. Sunday and Monday, from 2 to 4 p.m. Tuesday.

Employees must wear their badges and escort family members through the regular public entrance on the northeast side of Bldg. 30. Visitors should limit their stays during busy periods. Children under the age of 5 will not be permitted in the viewing area.

The STS-41 crew return ceremony will be outside Bldg. 1 about eight hours after landing at Edwards Air Force Base in California. Based on a planned 8:42 a.m. Wednesday landing, the ceremony would begin about 4:30 p.m. Wednesday. In case of rain, the ceremony will be in Teague Auditorium.

Since many variables are involved in mission operations, viewing and crew return times may change with little notice. Employees are encouraged to call the Employee Information Service at x36765 for the latest information.

Special cafeteria hours have been set for the mission, as well. The Bldg. 3 cafeteria will be open from 7 a.m.-4:30 p.m. weekdays, weekends and holidays. The Bldg. 11 cafeteria will be open from 6:30 a.m.-2 p.m. weekdays.



JSC Photo by Jack Jacob

HISPANIC SOUL—Raul Mejia, a software development project manager in JSC's Information Systems Directorate, plays Spanish music on his guitar during last week's Hispanic Heritage celebration at the Gilruth Center. Mejia and keyboardist Ken Mathis are members of the group Las Lamas, which in English means The Souls.

Symposium eyes women, high-technology careers

JSC and the Center for the Advancement of Science, Engineering and Technology (CASET) will sponsor the first annual Women's Symposium on Women in Science, Engineering and Technology, Oct. 15-17, at the Gilruth Center.

The symposium will look at the underrepresentation of women in fields such as science, engineering and technology. Participants will discuss ways of preparing women of all ages and ethnic backgrounds for scientific and technical careers, and innovative methods for bringing them into the technological work force.

Dr. Harriett Jenkins, assistant administrator for Equal Opportunity Programs at NASA Headquarters, will speak at the 9:30 a.m., Oct. 15,

opening session. Betty Vetter, executive director, Commission of Professionals in Science and Technology, will be the keynote speaker at 10:45 a.m.

Dr. Mae Jemison, NASA astronaut, will speak at 12:30 p.m. during the opening day luncheon. Luncheon tickets, available through CASET's Linda Talley, 280-4875, or Freda Marks, JSC's Federal Women's Program Manager, x30606, must be purchased by Oct. 10.

CASET is studying recruitment and retention factors related to minorities and women in science and technology careers. CASET is funded by the Department of Defense, and receives support from NASA and the Department of Labor.

JSC nominates Raynor for minority contractor award

JSC has nominated Raynor Computer Services Inc. of Houston to compete for NASA's Minority Contractor of the Year award.

Local Minority Enterprise Development Week activities recognizing minority businesses' achievements and contributions to the nation's economy will conclude Saturday at the Hilton Southwest, 6780 Southwest Freeway, Houston.

Raynor has provided outstanding office equipment maintenance and repair services to JSC since April 1989. Originally founded as Micro Doctor, the company has had a history

of outstanding performance since its inception in 1984.

NASA has worked actively to place a representative portion of its business with minority-owned firms. JSC's commitment to using minority businesses has increased from \$73,000 in annual business obligations during fiscal year 1970 to \$35.7 million in fiscal year 1989.

The highlight of this week's activities will be today's awards luncheon at the Hilton Southwest. For details, contact Juanita Shihadeh, executive director of the Houston Hispanic Chamber of Commerce, 759-1101.

Furlough plans at JSC on hold

(Continued from Page 1) and set Oct. 19 as the target for final passage.

But with only a week-long continuing resolution that suspends sequestration in effect, many possible options range from a signed budget and a return to normal operations to a government-wide shutdown if the continuing resolution is not extended.

The Human Resources Office continued to deliver "decision letters" to employees this week that are the final notices of an impending furlough, Lister said. Those letters remain valid for 22 non-consecutive or 30 consecutive

furlough days. JSC's overall plan for taking furlough days and the individual plans drawn up by each directorate have been placed on hold while center officials monitor the proposed budget's progress in Washington.

The effects of any furlough on STS-41 mission staffing are as yet unknown.

Any significant developments in the furlough situation will be reported on the recorded JSC Employee Information Service, x36765, throughout the weekend. Employees should call the service if they have questions about whether to report to work Monday.

Fluids engineering scholar sought

JSC engineers are being invited to apply for the American Society of Mechanical Engineers' 11th Freeman Scholar Program in fluids engineering. Application deadline is Feb. 1, 1991.

The person selected as a Freeman Scholar will be required to: prepare a major review of a coherent topic in his or her speciality; prepare a comprehensive statement of the state of the field; and suggest key research needs for the future. The

results will be presented at the ASME Winter Annual Meeting under the auspices of the Fluids Engineering Division, and published in the ASME Journal of Fluids Engines at the Winter Annual Meeting is \$7,500. There will be an additional allowance to cover travel costs to the meeting.

The recipient may be from industry, government, education or private professional practice. The recipient does not need to be an ASME member but should have consider-

able experience in some area of fluids engineering.

The scholar also must be available for lecture presentations at sites of fluids engineering activity in industry, government, or education. The inviting institution will be expected to pay all expenses and, if necessary, provide a honorarium.

For additional information about the application process, interested people should contact either Duane Ross or Helen Harris at x38411.

Witness plates also exposing space station materials

(Continued from Page 1) satellite beyond repair.

"We're looking to see how the silver interconnects may have deteriorated," ISAC Project Engineer Guy King said. The silver connects the hundreds of solar cells that make up the satellite's arrays. The ISAC experiment was manifested on STS-41 and ready for flight in less than four months, King added.

"It was a lot easier since we have flown three missions using the remote manipulator system witness plates before: STS-14, STS-61B and STS-11," he said.

Shortly after Intelsat was stranded in

a 190-nautical mile orbit, the company "safed" the satellite by using its on-board propulsion to boost it to a 350 mile-high orbit, and later, to a 400-mile orbit. The higher altitude reduced the corrosive effects of atomic oxygen to a minimal amount, but the effects of time spent in the low orbit are less certain.

Ground testing of the effects, using a device at the Los Alamos National Laboratories, has shown that the solar arrays should be in good condition, said Steve Koontz of JSC's Non-Metallic Materials Section, one of the NASA principal investigators.

"The reason they have an atomic

oxygen problem at all in low orbit is because they launched at the solar maximum, the Sun's peak period of activity," Koontz said. "Atomic oxygen goes up as much as a hundredfold at solar max; they launched into an atomic oxygen storm."

Although ground analysis has shown the arrays are probably not badly damaged, once ISAC is complete scientists will "have a complete body of knowledge about the satellite's most critical parts," Koontz said.

In addition to the Intelsat samples, Discovery's witness plates also carry 48 NASA material samples that will benefit designers of Space Station

Freedom and the Hubble Space Telescope repairs, he added. Among the 48 samples are lubricants planned for space station, airock hatch O-ring materials for Freedom, optical coatings and wiring materials used on HST, and diamond-thin films.

The exposure of these materials will allow designers to better evaluate the maintenance needs associated with their use in space, Koontz said.

"We needed a flight opportunity, to go both toward helping verify the ground-based test results on Intelsat," he added, "as well as helping us to make good low-maintenance design decisions."

Space News Roundup

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